

REMARKS

The Office Action mailed September 2, 2005, has been received and reviewed. Claims 13 through 26 and 33 through 45 are currently pending in the application. Claims 13 through 26 and 33 through 45 stand rejected. Applicant has amended claims 13, 17, 20, 25, 33, 34, 37, 38 and 42-45. Reconsideration is respectfully requested.

35 U.S.C. § 112 Claim Rejections

Claims 13 through 26 and 33 through 45 stand rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification was objected to for failing to provide proper antecedent basis for the claimed subject matter. Applicant respectfully traverses this rejection, as hereinafter set forth.

Specifically, it was stated that the specification did not provide support for the etchant dispenser and cathode assembly being “mutually moved.” (Office Action mailed September 2, 2005, page 3). While Applicant does not agree with this statement, in the interest of expediting prosecution, independent claim 13 has been amended to recite “applying an etchant locally to uncover a structure in the peripheral area of the cathode assembly, including ~~mutually~~-moving an etchant dispenser or the cathode assembly relative to one another during the applying.” Support for the amendment may be found throughout the as-filed specification, for example, page 8 second-~~full~~ paragraph. Each of independent claims 17, 20 and 25 and dependent claims 33, 34, 37, 38 and 42-45 have been similarly amended. Reconsideration and withdrawal of the rejection is requested.

35 U.S.C. § 103(a) Obviousness Rejections

Obviousness Rejection Based on Applicant's Admitted Prior Art in view of U.S. Patent No. 5,271,798 to Sandhu et al., and in further view of U.S. Patent No. 5,700,176 to Potter

Claims 13 through 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant's Admitted Prior Art in view of Sandhu et al. (U.S. Patent No. 5,271,798), and in further view of Potter (U.S. Patent No. 5,700,176). Applicant respectfully traverses this rejection, as hereinafter set forth.

M.P.E.P. 706.02(j) sets forth the standard for a Section 103(a) rejection:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, **the prior art reference (or references when combined) must teach or suggest all the claim limitations.** The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (Emphasis added).

Sandhu discloses a method of selective removal of material from a semiconductor wafers alignment mark. (Abstract) The method includes positioning the wafer surface in relation to an apparatus 21 such that a leak-proof seal 22 is formed against the wafer surface 11. The apparatus 21 dispenses tungsten etchant onto an alignment mark 12 to remove residue 13. (Sandhu, col. 3, lines 1-6; Specification, page 4, last paragraph). Potter discloses a method of manufacturing a field emission device. Applicant respectfully submits that the combination of Sandhu, Potter and the admitted prior art fails to teach or suggest every element of the presently claimed invention.

By way of contrast with the cited art, independent claim 13 of the presently claimed invention recites a "method of making an FED having a central active display area and a surrounding peripheral area, comprising: making a cathode assembly; applying an etchant locally to uncover a structure in the peripheral area of the cathode assembly, including applying an etchant locally to uncover a structure in the peripheral area of the cathode assembly, including moving an etchant dispenser or the cathode assembly relative to one another during the applying; making an anode assembly, and assembling said cathode and anode assemblies." (Support for

this amendment may be found throughout the as-filed specification including, for example, page 8, second full paragraph).

The cited art fails to teach or suggests “applying an etchant locally to uncover a structure in the peripheral area of the cathode assembly, including moving an etchant dispenser or the cathode assembly relative to one another during the applying.” Instead, Sandhu discloses applying the etchant while the dispenser 21 and the wafer 11 are both stationary. (Sandhu, col. 3, lines 1-6). Specifically, the wafer surface 11 is positioned in relation to adhesive apparatus 21 such that a leak-proof seal is formed. Then, after positioning the etching dispenser, an etching agent is applied. (*Id.*). In other words, any movement of the etchant dispenser occurs prior to forming a leak-proof seal and dispensing etchant. Accordingly, Sandhu fails to teach or suggest moving an etchant dispenser or the cathode assembly relative to one another *during the applying* as recited in claim 13 of the presently claimed invention. Potter and the admitted prior art do not disclose applying an etchant locally to uncover a structure in the peripheral area of the cathode assembly, including moving an etchant dispenser or the cathode assembly relative to one another during the applying. Because Sandhu focuses on creating a leak-proof seal between dispensing apparatus 21 and wafer surface 11, it would not be obvious to modify Sandhu to include the presently claimed invention. As the cited art fails to teach or suggest every element of claim 13 of the presently claimed invention, the cited art cannot render claim 13 obvious. Accordingly, claim 13 is allowable.

Claims 14-16 and 33-36 are further allowable as depending, either directly or indirectly, from allowable claim 13.

Claim 33 is further allowable as the cited art fails to teach or suggest “moving the etchant dispenser relative to the cathode assembly” while applying etchant. Instead, Sandhu discloses applying the etchant while the dispenser 21 and the wafer 11 are both stationary. (Sandhu, col. 3, lines 1-6). Potter and the admitted prior art lack any similar disclosure.

Claim 34 is further allowable as the cited art fails to teach or suggest “moving the cathode assembly relative to the etchant dispenser.” Instead, Sandhu discloses applying the etchant while the dispenser 21 and the wafer 11 are both stationary. (Sandhu, col. 3, lines 1-6). Potter and the admitted prior art lack any similar disclosure.

Claim 35 is further allowable as the cited art fails to teach or suggest “applying the etchant on the bond pads in elongated spray zones.” Instead, Sandhu discloses applying the etchant while the dispenser 21 and the wafer 11 are both stationary. (Sandhu, col. 3, lines 1-6). Potter and the admitted prior art lack any similar disclosure.

Claim 36 is further allowable as the cited art fails to teach or suggest “spraying the etchant from a nozzle in the etchant dispenser while moving the nozzle linearly over the cathode assembly.” Instead, Sandhu discloses applying the etchant while the dispenser 21 and the wafer 11 are both stationary. (Sandhu, col. 3, lines 1-6). Potter and the admitted prior art lack any similar disclosure.

Independent claims 17, 20 and 25 are each allowable for at least the same reasons as allowable claim 13. Sandhu discloses applying the etchant while the dispenser 21 and the wafer 11 are both stationary. (Sandhu, col. 3, lines 1-6). Specifically, the wafer surface 11 is positioned in relation to adhesive apparatus 21 such that a leak-proof seal is formed. Then, after positioning the etching dispenser, an etching agent is applied. (*Id.*). In other words, any movement of the etchant dispenser occurs prior to forming a leak-proof seal and dispensing etchant. Each of claims 17, 20 and 25 include a similar recitation of “locally applying an etchant to uncover a structure in the peripheral region of the anode assembly, including moving an etchant dispenser or the anode assembly relative to one another during the applying.” As the cited art fails to teach or suggest every element of claim 17, 20 or 25 of the presently claimed invention, the cited art cannot render claims 17, 20 and 25 obvious. Accordingly, claims 17, 20 and 25 are allowable.

Claims 18-19 and 37 – 41 are each allowable as depending, either directly or indirectly, from allowable claim 17.

Claim 37 is further allowable as the cited art fails to teach or suggest moving the etchant dispenser relative to the anode assembly. Instead, Sandhu discloses applying the etchant while the dispenser 21 and the wafer 11 are both stationary. (Sandhu, col. 3, lines 1-6). Potter and the admitted prior art lack any similar disclosure.

Claim 38 is further allowable as the cited art fails to teach or suggest moving the anode assembly relative to the etchant dispenser. Instead, Sandhu discloses applying the etchant while

the dispenser 21 and the wafer 11 are both stationary. (Sandhu, col. 3, lines 1-6). Potter and the admitted prior art lack any similar disclosure.

Claim 40 is further allowable as the cited art fails to teach or suggest applying the etchant on the at least one bond pad in elongated spray zones. Instead, Sandhu discloses applying the etchant while the dispenser 21 and the wafer 11 are both stationary. (Sandhu, col. 3, lines 1-6). Potter and the admitted prior art lack any similar disclosure.

Claim 41 is further allowable as the cited art fails to teach or suggest spraying the etchant from a nozzle in the etchant dispenser while moving the nozzle linearly over the cathode assembly. Instead, Sandhu discloses applying the etchant while the dispenser 21 and the wafer 11 are both stationary. (Sandhu, col. 3, lines 1-6). Potter and the admitted prior art lack any similar disclosure.

Claims 21-24 and 42-43 are each allowable as depending, either directly or indirectly, from allowable claim 20.

Claim 42 is further allowable as the cited art fails to teach or suggest moving the etchant dispenser relative to the substrate. Instead, Sandhu discloses applying the etchant while the dispenser 21 and the wafer 11 are both stationary. (Sandhu, col. 3, lines 1-6). Potter and the admitted prior art lack any similar disclosure.

Claim 43 is further allowable as the cited art fails to teach or suggest moving the substrate relative to the etchant dispenser. Instead, Sandhu discloses applying the etchant while the dispenser 21 and the wafer 11 are both stationary. (Sandhu, col. 3, lines 1-6). Potter and the admitted prior art lack any similar disclosure.

Claims 26, 44 and 45 are each allowable as depending, either directly or indirectly, from allowable claim 25.

Claim 44 is further allowable as the cited art fails to teach or suggest moving the etchant dispenser relative to the substrate. Instead, Sandhu discloses applying the etchant while the dispenser 21 and the wafer 11 are both stationary. (Sandhu, col. 3, lines 1-6). Potter and the admitted prior art lack any similar disclosure.

Claim 45 is further allowable as the cited art fails to teach or suggest moving the substrate relative to the etchant dispenser. Instead, Sandhu discloses applying the etchant while the

dispenser 21 and the wafer 11 are both stationary. (Sandhu, col. 3, lines 1-6). Potter and the admitted prior art lack any similar disclosure.

ENTRY OF AMENDMENTS

The amendments to the claims above should be entered by the Examiner because the amendments are supported by the as-filed specification and drawings and do not add any new matter to the application.

CONCLUSION

Claims 13-26 and 33-45 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Office determine that additional issues remain which might be resolved by a telephone conference, the Examiner is respectfully invited to contact Applicant's undersigned attorney.

Respectfully submitted,



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